

In the claims:

1. A method of identifying, in a directory server, a new mail domain associated with an incoming message that is received by a messaging server,
5 comprising:
 - receiving a new domain name associated with the incoming message at the messaging server;
 - creating a corresponding entry in a directory in the directory server for every component included in the new domain name that does not already exist in the directory;
 - 10 automatically updating a corresponding real domain service record in a domain name server associated with the directory server based upon the entry; and
 - identifying the new mail domain by the directory server based upon the automatically updated real domain record.
- 15 2. A method as recited in claim 1, further comprising:
 - automatically generating a routing table based upon the created entry.
3. A method as recited in claim 2, wherein the identifying is also based upon
the automatically generated routing table.
20
4. A method as recited in claim 3, wherein the messaging server includes a transfer unit that uses the automatically generated routing table to open a channel by which the incoming message is delivered.

5. A method as recited in claim 4, wherein the transfer unit includes a local directory cache used to store most recently used directory entries thereby reducing traffic between the messaging server and the directory server.

5 6. A method as recited in claim 5, wherein the local directory cache is periodically updated (synchronized) whenever the directory server has been updated.

7. A method as recited in claim 6, wherein the directory is a hierarchically organized directory.

10 8. A method as recited in claim 8, wherein the hierarchically organized directory is an LDAP based directory information tree (DIT).

15 9. A method as recited in claim 1, wherein the creating is based upon a mail exchange record (MX) associated with the incoming email message.

10. An electronic messaging system having a main host computer for transferring an incoming email message between a sending subscriber and a receiving subscriber wherein the receiving subscriber is identified by a receiving subscriber user name and corresponding receiving subscriber domain name, comprising:

20 a messaging server coupled to the main host computer suitably arranged to receive the incoming message from the sending subscriber and forward the incoming message to the receiving subscriber; and

a directory server coupled to the main host computer that identifies for the messaging server a location of the receiving subscriber based upon the receiving subscriber user name and the receiving subscriber domain name, wherein when the receiving subscriber domain is a new domain, the directory server creates a

5 corresponding entry in a directory in the directory server for every component included in the new domain name that does not already exist in the directory, and wherein the directory server then automatically updates a corresponding real domain name record that is, in turn, used by the directory server to identify the new domain.

10 11. An electronic messaging system as recited in claim 10, wherein the messaging server automatically generates a routing table based upon the created entry.

15 12. An electronic messaging system as recited in claim 11, wherein the DNS record is updated based upon a mail exchange (MX) record associated with the incoming message.

20 13. An electronic messaging system as recited in claim 12, wherein the messaging server includes a transfer unit that uses the automatically generated routing table to open a channel by which the incoming message is forwarded to the receiving subscriber.

14. A computer-readable medium containing programming instructions for identifying, in a directory server, a new domain associated with an incoming message that is received by a messaging server, the computer-readable medium comprising

computer program code devices configured to cause a computer to execute the operations of:

receiving a new domain name corresponding to the new domain by the messaging server;

5 creating a corresponding entry in a directory in the directory server for every component included in the new domain name that does not already exist in the directory; automatically updating a corresponding real domain server record in a domain name server associated with the directory server based upon the entry; and identifying the new mail domain by the directory server based upon the

10 automatically updated real domain record.

15. A computer-readable medium as recited in claim 14 wherein the computer program code devices configured for identifying, in a directory server, a new domain associated with an incoming message that is received by a messaging server

15 further includes computer program code devices configured to cause a computer to execute the operations of:
automatically generating a routing table based upon the created entry.

16. A computer-readable medium as recited in claim 15 wherein the computer program code devices configured for identifying, in a directory server, a new domain associated with an incoming message that is received by a messaging server further includes computer program code devices configured to cause a computer to execute the operation of the identifying is also based upon the automatically generated routing table.

17. A computer-readable medium as recited in claim 16 wherein the
computer program code devices configured for identifying, in a directory server, a new
domain associated with an incoming message that is received by a messaging server
further includes computer program code devices configured to cause a computer to
5 execute the operation of using the automatically generated routing table to open a
channel by which the incoming message is delivered by a transfer unit incorporated into
the messaging server.

18. A computer-readable medium as recited in claim 17 wherein the
10 computer program code devices configured for identifying, in a directory server, a new
domain associated with an incoming message that is received by a messaging server
further includes computer program code devices configured to cause a computer to
execute the operation of storing the most recently used directory entries in a local
directory cache thereby reducing traffic between the messaging server and the directory
15 server.

19. A computer-readable medium as recited in claim 18 wherein the
computer program code devices configured for identifying, in a directory server, a new
domain associated with an incoming message that is received by a messaging server
20 further includes computer program code devices configured to cause a computer to
execute the operation periodically updating (synchronizing) the local directory cache
whenever the directory server has been updated.